REMARKS

The Office Action, dated October 10, 2007, has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto.

Following the current amendments, claims 1-11 and 13-26 are currently pending for consideration, of which claims 1, 16, and 21-23 are independent. In particular, claims 13 and 23 has been amended and claims 24-26 have been added to more particularly point out and distinctly claim the invention. It is respectfully submitted that the present amendment added no new subject matter to the present application and serves only to more particularly point out and distinctly claim the invention. Applicants urge that all grounds for rejection in the Office Action are addressed in this Response and that the present application is currently in condition for allowance in view of the amendment and the following arguments. Therefore, reconsideration and allowance of the claims are respectfully requested.

Objection to the Drawings

The drawings were objected to for failing to comply with 37 CFR 1.83(p)(4). In particular, the Office Action alleged that the recitations of "changing means" and "means for selectably changing" in claim 22 and the changing units (now first and second "changers") in claim 23 are not depicted in the drawings. Applicants urge that these

recitations are fully depicted in the current figures and that this objection should be withdrawn.

In particular, Applicants note that the corresponding published patent application provides the following disclosure at paragraphs [0040]-[0042] related to the recitations of claims 22 and 23 that are the basis of the objection to the drawings:

> When detected by the receive portion 36 of the base transceiver station, such information is extracted and provided to the enhanced LRI function 56. Calculations are performed by the calculator 58 to determine a switching threshold value. In one implementation, several switching threshold levels are calculated. The switching level thresholds are calculated according to a constrained optimization scheme. In the exemplary implementation, the constrained optimization scheme selects a switching threshold level to maximize throughput while maintaining the frame error rate with selected levels. As the values of TP and FER change, the value of the switching threshold level also changes in conformity with compliance with the constrained optimization scheme. Thereby, the switching threshold level is adaptively determined.
>
> Indications of the selected switching threshold levels are provided to the adaptive modulator, here by way of the line 82. The adaptive modulator makes use of the switching threshold level to determine the modulation parameter, or parameters, generated on the lines 56 and 58. As the switching threshold level is adaptively alterable, the modulation parameters selected by the adaptive modulator correspondingly are adaptively alterable. Thereby, depending upon the communication conditions upon the radio link 16, the modulation parameters are better selected to facilitate the best level of communications, i.e., the highest throughput levels while maintaining frame error rates within acceptable levels.
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> The adaptive modulator 54 is coupled to receive indications of an SNR value, here applied by way of the line 84. The SNR value is compared together with the switching threshold level and, responsive to the comparison, the adaptive modulator selects the modulation parameters to be used by the transmit portion 38 of the base transceiver station.

Accordingly, applicants urge that the recited limitation of a "changing means" and a "means for selectably changing" from claim 22 are depicted in Figure 1 with sufficient clarity to enable one of ordinary skill in the field of the application to understand and implemented the recited embodiment of claim 22. Likewise, the recitations of the "first changer" and the "second changer" in claim 23 are similarly depicted in Figure 1 with sufficient clarity to enable one of ordinary skill in the technical field of the application to understand and implemented the recited embodiment of claim 23. Therefore, Applicants urge that this objection in improper and request that the objection be withdrawn.

Allowed/Objected Claims

Applicants note with great appreciation that Office Action noted that claims 14, 15, and 21 were allowed and claims 13, 19, and 20 were allowable but objected to as depending from rejected claims, but would be allowed if rewritten in independent form to include the limitations of the base claim and any interceding claims. Accordingly, Applicants have added new claims 24 and 25, corresponding to claims 13 and 19 rewritten in independent form. Similarly, new claim 26 corresponds to claim 20, but depends instead from new claim 25. Allowance of claims 24-26 is respectfully requested.

Rejection under 35 U.S.C. §102(e)

Claims 1-12, 16-18, and 22-23 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,452,964 (Yoshida). According to the Office Action, Yoshida teaches every claimed recitation of claims 1-12, 16-18, and 22-23. However, as will be discussed below, Yoshida does not disclose the recited elements of any of the claims 1-12, 16-18, and 22-23. Thus, this rejection is respectfully traversed and reconsideration is requested.

Claim 1, upon which claims 2-11 and 13-15 depend, recites an apparatus including a calculator adapted to receive indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval. The apparatus is configured to transmit data upon the communication channel and to dynamically select at least a first switching threshold used in selection of a modulation parameter. The calculator is configured to select the at least first switching threshold. The first switching threshold is changeable responsive to changes in the selected communication indicia and the first switching threshold is selected by the calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria.

Claim 16, upon which claims 17-20 depend, recites a method including selecting at least first switching threshold responsive to indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval. The first switching threshold is selected to at least satisfy a

first performance criteria and to satisfy at least a second performance criteria. The method also includes selecting the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel. The method further includes changing the at least first switching threshold responsive to changes in the indications of a selected communication indicia and selectably changing the modulation parameter responsive to changes in the at least first switching threshold.

Claim 22 recites an apparatus including selecting means for selecting the at least a first switching threshold responsive to indications of a selected communication indicia associated with communication characteristics of a communication channel during a selected interval, the first switching threshold selected to at least satisfy a first performance criteria and to satisfy at least a second performance criteria. The apparatus also includes selecting means for selecting the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel and changing means for changing the at least the first switching threshold responsive to changes in the indications of the selected communication indicia. The apparatus further includes means for selectably changing the modulation parameter responsive to changes in the at least the first switching threshold.

Claim 23 recites an apparatus that includes a first selector configured to select the at least a first switching threshold responsive to indications of a selected communication indicia associated with communication characteristics of a communication channel

during a selected interval, the first switching threshold selected to at least satisfy a first performance criteria and to satisfy at least a second performance criteria. The apparatus also includes a second selector configured to select the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel and a first changer configured to change the at least the first switching threshold responsive to changes in the indications of the selected communication indicia. The apparatus further includes a second changer configured selectably changing the modulation parameter responsive to changes in the at least the first switching threshold.

As outlined below, Applicant submits that the cited reference of Yoshida does not teach or suggest the elements of claims 1-12, 16-18, and 22-23.

As described in previous responses, Yoshida discloses an adaptive modulator/encoder 104 of a transmitter in station A that executes encoding and modulation processes corresponding to a plurality of modulation levels. A modulation level decision unit 105 of the transmitter decides the modulation level of a signal to be transmitted, based on both an average received power reported from a received power measurement unit of a receiver and a threshold at each modulation level, and reports it to a data selector 106 of the transmitter in station A. The data selector 106 selects a modulation signal among modulation signals at each of the modulation levels outputted from the adaptive modulator/encoder which corresponds to the modulation level reported

from the decision unit, and transmits it to a correlation channel as a transmitted signal for station B. See Col. 6, lines 4-27.

Yoshida also discloses that first an average carrier-to-noise (CNR) ratio is observed by a receive power measurement unit in each receiver, as the observing operation of an average received power. The observation result is obtained by the decision unit 105 in each transmitter and a modulation level is decided by the decision unit 105 in each transmitter based on a threshold CNR at each modulation level. A control that sets the average transmitted power of a generated signal to a predetermined value is incorporated in each of the dynamically selected modulation methods. See Col. 7, line 16 - Col. 8, line 51.

Referring now to claim 1, Applicant submits that Yoshida simply does not teach or suggest a calculator coupled to dynamically select at least a first switching threshold used in selection of a modulation parameter, the first switching threshold changeable responsive to changes in the selected communication indicia, and the first switching threshold selected by said calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria. In particular, Yoshida does not teach dynamically selecting the first switching threshold, the first switching threshold changeable responsive to changes in the selected communication indicia, and the first switching threshold selected by said calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria, as recited in the presently pending claims.

Instead, as described above, Yoshida merely teaches that data selector 106 **selects a modulation signal** among modulation signals at each of the modulation levels based on a threshold CNR at each modulation level. There is no teaching or suggestion in Yoshida that the calculator **dynamically selects** at least a first switching threshold used in selection of a modulation parameter, the first switching threshold **changeable responsive to changes in the selected communication indicia**, and the first switching threshold selected by said calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria, as recited in the presently pending claims.

Therefore, Applicant respectfully urge that the rejection of claim 1 under 35 U.S.C. §102(e) should be withdrawn because Yoshida does not teach or suggest each feature of that claim. Claims 2-11 depend from claim 1 and are likewise allowable on similar grounds. Accordingly, reconsideration and allowance of claims 1-12 are respectfully requested.

Similarly, independent claims 16, 22 and 23, although different in scope from claim 1 and rejected on different grounds, also contains similar recitations related to a calculator coupled to dynamically select at least a first switching threshold used in selection of a modulation parameter, the first switching threshold changeable responsive to changes in the selected communication indicia, and the first switching threshold selected by said calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria. Thus, Yoshida similarly fails to teach or suggest each and every limitation recited in claims 16 and 22-23, and for at least this reason,

Applicants urge that the rejection of these claims in view of Yoshida is clearly improper. Likewise, claims 17-18 depend from claim 16 and should be allowed on similar grounds. Withdrawal of this rejection of claims 16-18 and 22-23 and reconsideration of these claims in view of these arguments are respectfully requested.

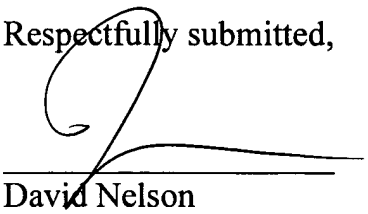
Conclusion

As discussed above, each of claims 1-11 and 13-26 recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants submit that the recited subject matter is more that sufficient to render the invention non-obvious to a person of ordinary skill in the art. It is respectfully requested that independent claims 1, 16, and 22-23 and the related dependent claims be allowed in view of the above arguments comments and remarks and that independent claims 21 and 24-25 and the related dependent claims continue to be allowed.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



David Nelson
Registration No. 47,818

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

DDN/ksh:cqc

Enclosure: Petition for Extension of Time
Additional Claims Transmittal
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